FEBRUARY 1953

ARMY INFORMATION DIGEST

rivers. Here the United States Army Signal Corps had its headquarters from November 1918 to January 1923—thirty years ago when the

In This Issue:

ASPIRATIONS toward national unity and human freedom dominated the lives of two great national leaders born in February.

"HE WILL BE THE BEST SOLDIER AND PATRIOT who contributes most to the glorious work of sinking all distinctions in the name of An American.... Let all distinctions of Nations, Countries and Provinces therefore be lost in the generous contest as to who shall behave with the most courage against the enemy and the most kindness and good humour to each other. . . ." These words by General George Washington are as applicable in our modern day United States as when first penned in 1777.

NINETY YEARS AGO, President Abraham Lincoln gave voice to mankind's yearning for freedom by placing into effect the Emancipation Proclamation. "On the first day of January, in the year of our Lord 1863," the formal wording runs, "all persons held as slaves . . . shall be then, thenceforward, and forever free, and the Executive Government of the United States, including the military and naval authority thereof, will recognize and maintain [that] freedom.

A SYMBOL OF SPLENDOR AND GREATNESS, the National Capitol was begun in 1793, with President Washington himself laying the cornerstone. Inaugurations of our Presidents are traditionally held on the East Front steps against the backdrop depicted on the cover.

AS ONE OF THE LEADING LAND, SEA AND AIR POWERS of the world, it is difficult for us to realize that at one time our Republic was striving for recognition of its very existence. An historic moment is portrayed in the back cover painting by Edward Moran—the first recognition of the American Flag by a foreign government. In the harbor of Quiberon, France, on 13 February 1778, the Stars and Stripes borne by John Paul Jones' ship *Ranger* received a formal salute from the French fleet.

OTHER FEBRUARY MILESTONES include the founding of the Army Nurse Corps (1901), the establishment of the Army General Staff (1903); the beginning of the siege of the Alamo by Mexican forces (1836); the battle of Kasserine Pass (1943) and the landing on Iwo Jima (1945).

JUST AS INSTITUTIONS are but the lengthened shadows of the men who lead them, a taut fighting outfit reflects the character and determination of its leaders—officers and noncommissioned officers alike. Some of the ingredients of "American Military Leadership" are summarized by the Chairman of the Joint Chiefs of Staff.

"INTELLIGENT MILITARY PLANNING must be paralleled by a projection of scientific research and development into the future," General J. Lawton Collins declares in "Soldiers and Scientists—Partners in Defense." The Army Chief of Staff traces the impact of scientific advances on defense techniques and manpower policies.

AMID THE WRECKAGE of homes and lives inflicted by Communist invaders, the United Nations Civil Assistance Command, Korea, conducts a gigantic reconstruction program in South Korea. Efforts to maintain health and restore economic life in the war-stricken areas are recorded in "Civil Assistance in Korea."

STILL ANOTHER FORM OF PERSONAL SERVICE being carried on by American Red Cross field directors among our troops in Korea is described in "The Red Cross in the Field."

ARMY INFORMATION DIGEST

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Chase News Photograph

THE HONORABLE DWIGHT D. EISENHOWER
THIRTY-FOURTH PRESIDENT OF THE UNITED STATES
COMMANDER IN CHIEF OF THE ARMED FORCES

DWIGHT D. EISENHOWER

THE HONORABLE DWIGHT D. EISENHOWER who took office as President of the United States on 20 January is also, by virtue of that position, the Commander in Chief of the Armed Forces.

A graduate of the United States Military Academy in the class of 1915, President Eisenhower's career has been closely linked with the build-up of the Nation's defenses during an era when successive waves of dictatorship and tyranny—both Nazi and Communist—threatened to engulf the Free World. His success in leading the Allied armies during their victorious drive on Hitler's Fortress Europa and, more recently, in cementing the military alliance of the North Atlantic Treaty states brought him renown as military leader and statesman.

Born 14 October 1890 at Denison, Texas, President Eisenhower attended public schools at Abilene, Kansas, then passed competitive examinations for admission to both the United States Military and Naval Academies. Upon graduation from the Military Academy in 1915, he was commissioned second lieutenant of Infantry. As a temporary lieutenant colonel, he commanded the newly formed Tank Training Center at Camp Colt, Pennsylvania, during World War I. He was graduated with honors from the Command and General Staff School in 1926, from the Army War College in 1928 and from the Army Industrial College in 1933. From 1929 to 1935 he served successively in the Office of the Assistant Secretary of War and in the Office of the Chief of Staff. In Manila from 1935 to 1940, he was Assistant to the Military Adviser of the Commonwealth of the Philippine Islands, General Douglas MacArthur.

Following the Japanese attack on Pearl Harbor, he was summoned to Washington from duties as Chief of Staff, Third Army, and named Chief of the War Plans Division, War Department General Staff. In April 1942 he was designated Assistant Chief of Staff in charge of the Operations Division, Office of the Chief of Staff, and in June he was assigned as Commanding General of United States troops in the European Theater.

General Eisenhower commanded American forces during the invasion of North Africa in November 1942 and then, as Commander in Chief of Allied Forces there, directed the campaign

in which his relatively untried troops defeated General Rommel's seasoned *Afrika Korps.*

In December 1943, General Eisenhower was named Supreme Commander, Allied Expeditionary Forces. From SHAEF headquarters in London and Portsmouth and later in Versailles, he directed and co-ordinated the strategy of the Allied land, sea and air forces which mounted the mammoth Normandy invasion of 6 June 1944. Following the battle of the hedgerows, the German armies were swept from Northwestern France, across the Rhine and ultimately to resounding defeat.

Afterward, General Eisenhower became Military Governor of the United States Occupied Zone in Germany with headquarters at Frankfurt. In November 1945 he was named to succeed General of the Army George C. Marshall as Chief of Staff. In April 1946 he was appointed to permanent five star rank. With the passage of the National Security Act of 1947, General of the Army Eisenhower became the Army's first Chief of Staff to participate in the newly created, unified Joint Chiefs of Staff. In 1948 he retired from active military assignment to become president of Columbia University.

In December 1950 he was recalled by President Truman to become Supreme Allied Commander, Europe, in which capacity he directed the organization and build-up of military forces for the North Atlantic Treaty Organization as it armed for defense against Communist aggression. Returning to the United States in June 1952, he resigned his commission after thirty-seven years of service as an officer of the United States Army. On 4 November 1952 he was elected thirty-fourth President of the United States.

We must all recognize—in all our thinking and our planning—that the Korean War is but the most dramatic and most painful phase, for us at this moment, of our world-wide struggle against Communist aggression.

We face an enemy whom we cannot hope to impress by words, however eloquent, but only by deeds—executed under circumstances of our own choosing.

I hope and believe that our fighting men in Korea shall never harbor the thought that they might be fighting a forgotten war.

I believe that the architects of aggression can be made to realize that it would be fateful folly to ignite other conflagrations like the Korean conflict elsewhere in the world.

I believe that if we think clearly enough, plan carefully enough, and work tirelessly enough, we can both save freedom and secure peace.

The Honorable Dwight D. Eisenhower on his return from Korea, 14 December 1952

AMERICAN MILITARY LEADERSHIP

GENERAL OF THE ARMY OMAR N. BRADLEY

THE GREATEST SOLDIER in the world could never win a campaign unless he had the kind of leadership in his make-up which best suited the men he had to lead. Certainly, the Prussian-type of discipline would not win the co-operation and respect of young Americans. Nor would the political commissar supervision of the Soviets ever encourage an American platoon to fight the kind of battles that the first battalions into Korea had to fight.

Americans need the kind of leadership that is typical of a growing, colorful nation, made up of honest, patriotic and rugged individualists. It is from our average soldier of World War II and his long line of valorous ancestors that we can derive our credo of military leadership.

From my experience with the American soldier, I believe that what he wants in a leader sums up about like this:

He wants a leader who knows his job. The American soldier is a proud one and he demands professional competence in his leaders. In battle, he wants to know that the job is going to be done right, with no unnecessary casualties. The non-commissioned officer wearing the chevron is supposed to be the best soldier in the platoon and he is supposed to know how to perform all the duties expected of him. The American soldier expects his sergeant to be able to teach him how to do his job. And he expects even more from his officers.

He wants a leader who is fair. When the battle missions are tough and dangerous, he wants them assigned as evenly as the battle situation permits. Actually, he demands that his company and his platoon get their just share of the tough assignments. He wants to do his job.

If there are privileges, he wants them parcelled out as evenly as possible. He basically despises any favoritism on the basis of race or color or creed. He recognizes that the responsibilities

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From an address at the United States Military Academy, 20 May 1952.

of leadership are often rewarded with some of the privileges of accomplishment. But he does not want privileges abused.

He wants a leader who is energetic and forceful. Even though he may be lazy himself, he wants his leaders on the job. Then he will do his part under the most trying circumstances.

The American soldier expects to be well-supplied and well cared for. In the city or on the farm, American boys have seen the goods things of life provided in what we might consider a routine fashion. When a nation is joined together for a super-human effort for defense, he expects super-human results in the line of weapons, ammunition, food and other equipment. He expects good leadership to include good planning and supply. At the same time, when the difficulties of the situation are apparent and he has to make sacrifices, he is tolerant of the lack.

I was always conscious of the fact that the higher in command that an officer rises, the more faith and trust his soldiers have to place in him. No soldier dares to ask the division commander whether the attack is well planned. No private asks the regimental commander if his battalions are properly supported with artillery fire. A great deal of trust is placed in the leadership of an American fighting unit by its men. To meet this trust, an American leader must be well trained, well disciplined and professionally competent.

Perhaps most important is loyalty. On this factor alone battles are won or lost. To be really effective, loyalty must go three ways—up, down and sideways. Loyalty to the man who is in command demands a sincere effort to do what he orders and even to carry out what you believe should be done if he has not ordered it.

Loyalty on the part of the leader, to the men whom he leads, is the only adequate repayment for their loyalty. This means an understanding ear for their needs and complaints, an honest answer to their questions and a convincing and courageous presentation of their just needs to higher authority.

Loyalty sideways is voluntary co-operation with the man on your right and your left. This is the real fiber of American teamwork. This is the principle of democracy—do for him what you expect him to do for you—that works when all else fails.

Fairness, diligence, sound preparation, professional skill and loyalty are the marks of American military leadership. Upon every young officer rests the responsibility for giving the American soldier the inspired leadership that he deserves.

SOLDIERS AND SCIENTISTS--PARTNERS IN DEFENSE

GENERAL J. LAWTON COLLINS

IN TODAY'S ARMY it is absolutely impossible for military science to exist separately from the broader fields of science —and this includes not only the research and development of weapons and material but of ideas and techniques as well. Strategy and tactics define our needs and thus influence the direction of our military research and development efforts; but conversely, pure research and development are producing results which will inevitably influence future strategy and tactics.

The basic principles of war, however, remain immutable. For example, the Principle of Surprise remains as valid as ever. The Principle of Economy of Force is just as good today as it was in Napoleon's time. And the Principle of Mass—the concentration of superior force at the decisive place and time—is still as sound as always.

This does not mean that we are backing into the future. For we are applying strategic and tactical concepts to the solution not only of today's problems but of tomorrow's problems as well. Intelligent military planning must therefore be paralleled by a projection of scientific research and development into the future. Today the art of warfare and scientific progress are so interwoven, so interdependent, that it is growing increasingly difficult to draw any theoretical line between them and say that on this side of the line lies military science and on the other side lies non-military science. This is particularly true of war on land.

For this reason the Army in recent months has increased the responsibilities of the Deputy Chief of Staff for Plans by giving him the responsibility of insuring that our strategic planning and our Research and Development Program are in close step and under constant surveillance at the highest level. His main assistant is the Chief of Research and Development.

The working nucleus of our Army-Science team is the Army's

From an address before the Carnegie Institute Society, Pittsburgh, Pennsylvania, 16 October 1952.

Operations Research Office, headed by Dr. Ellis A. Johnson, and operated under contract with Johns Hopkins University. The staff in Washington, now numbering more than one hundred and twenty research personnel, integrates the resources of many of the universities and industrial research organizations of the United States for direct work on new weapons and for the analysis of problems of the training ground and the battlefield. Our research is not limited to the physical sciences. We also make use of advances in the social sciences because we fully realize the importance of the human element in combat.

The Operations Research Office and its many collaborating universities participate directly with the officers of our General Staff in the most critical analysis of the Army's operations. This honest soul-searching is designed to bring about the utmost efficiency as well as economy in the management of the Army and without regard to military or civilian viewpoints. The truth is our only aim. We seek thereby to choose the most modern and effective weapons for the battlefield, which at the same time can be produced at the minimum cost and with the least impact on our national economy. We seek also to insure that our Army personnel are trained by the most modern methods developed in educational research, and that their morale and psychological well-being—as well as physical well-being—are protected and preserved throughout their service in the Army. Above all, we seek to guarantee that the combination of men and machines for combat makes full use of modern scientific knowledge so as to insure victory with the *least* cost in American lives.

For illustrative purposes, consider how we have approached the problem of defeating Communist armor, in case war should be thrust upon us. We believe that the Communists have more than forty thousand tanks. The free world has many less. An obvious solution would have been to attempt to match their armor—tank for tank—since the tank is itself a splendid antitank weapon. But it is not the *only* antitank weapon. The facts are that we will not need forty thousand of our tanks to defeat a like number of enemy tanks if a showdown ever comes; moreover, tanks are terribly costly vehicles which take a long time to develop and produce. Therefore we have no intention of trying to match them tank for tank.

For these reasons we have laid great stress on the development of a family of antitank weapons. For defense at short ranges, we have our rifle grenades which are effective against practi-

cally any tank. Our 2.36-inch and 3.5-inch bazookas which will knock out enemy armor at slightly greater distances.

Next in the family are the recoilless rifles—the 57's and the 75's and the new 105's. They fire the same type of shaped charge ammunition that the bazooka fires, but to greater ranges. And to reach out still further, we have developed another type of ammunition for use with our standard artillery guns, and this ammunition will also knock out any known tank.

At the same time, we do not neglect our own tank development. Its offensive capabilities remain as important as ever. Consequently we have increased the proportion of tanks in our Army. In our standard infantry division today a tank company is an integral part of each infantry regiment in addition to the tank battalion in each infantry division. In other words, we have the equivalent of two tank battalions in each infantry division, whereas during World War II no tanks were regularly assigned in standard infantry divisions.

We had been working on the development of a family of tanks—light, medium and heavy-gun types since the end of World War II. The superiority of our Sherman, Pershing, and Patton tanks over Soviet T-34 tanks in Korea has been clearly established, vindicating the quality of our armor. In fire power, mobility and ruggedness, our tanks are capable of outmaneuvering and outslugging, if need be, any other tanks in the world.

Our approach to the threat of Communist air attack parallels our solution to the menace of Communist armor. Faced with the possibility of air attacks on our cities, the Army, intensely aware of its important role, is rapidly developing a family of fine antiaircraft weapons.

Our new antiaircraft guns and guided missiles will make our antiaircraft defenses tremendously more effective. For example, we will soon have in the hands of troops a new Skysweeper antiaircraft gun for use against planes flying at low and medium altitudes. It is without question the finest gun of its type in the world. It is radar controlled and can fire at an unbelievable rate against high speed targets under any conditions of weather or darkness. The Skysweeper fires shells with proximity fuses, which burst and cause great damage if they pass close to a target.

This does not mean we are going to shoot down every aircraft which may come over our soil. But it is our belief that such weapons, supplemented by our other new developments in antiaircraft artillery, missiles, rockets and ammunition, and

The new 280-mm. gun, the Army's largest artillery piece, is fired at Aberdeen Proving Ground.

U. S. Army Photograph

coupled with appropriate radar nets and interceptor aircraft, will aid materially in meeting an air attack.

To guard our homes from enemy attack, we have more than doubled the number of antiaircraft battalions. I emphasize this because I feel many Americans do not realize the effectiveness of ground fire against aircraft. During World War II, we lost many more planes to enemy antiaircraft fire than to enemy planes. And in Korea, 87 per cent of the United Nations' planes lost in combat have been brought down by enemy ground fire.

We also have made genuine progress in our development of guided missiles for the air defense of the United States. I recently visited White Sands and saw some of the firing of our NIKE missiles against aircraft, at ranges and altitudes which have never before been attempted and against targets which were trying to evade the missiles. They are living up to our most optimistic expectations. When they are in the hands of our units, our antiaircraft defense will be many times tighter.

But no war was ever won by remaining on the defensive and so we have emphasized the Army's need to move swiftly and devastatingly against an enemy. In any future war, air mobility will play a major role. Because of advances in air movement we have the potential of moving faster and farther and can hit an enemy with greater surprise than ever before. This increased mobility is multiplying our potential effectiveness both in airborne assault operations and in the strategic movement of troops over great distances.

We are making our standard infantry division air transportable, insofar as it is practicable. Within recent months we have flown our new light-gun tank, the T-41 Walker Bulldog, combat loaded with gasoline, crew and ammunition. This gives us the potential, in the early phases of an airborne operation, to supply our paratroopers with the armor punch they need.

In Korea, we have seen time and again the inestimable value of resupply by air in fast-moving tactical situations. The rugged terrain and inadequate roads and railroads have necessitated supply by air and, in many instances, it has proved to be the best means of supporting our troops.

Army helicopters as well as other light aircraft have been used to transport outpost and observation groups, to string wire communications, and to provide a rapid means of aerial reconnaissance and observation in forward areas. They have been used to evacuate wounded from front-line positions under fire, for the delivery of tank recovery crews, for on-the-spot

The new 280-mm. gun, the Army's largest artillery piece, is fired at Aberdeen Proving Ground. U. S. Army Photograph

repair of damaged equipment, for the rapid movement of commanders and their staffs, and—important to soldiers in the line—for flying hot food to men in advanced outposts. New uses for these aircraft are continually being developed, resulting in considerable savings of personnel and equipment. The commander of a regiment in Korea recently referred to his regimental pilot as his "eyes" and stated that he was worth six observers on the ground. A signal battalion commander in Korea reported that one airplane was doing communications work that had formerly been done by twenty jeeps and was doing it better and faster.

But by far the most dramatic progress in the Army's use of new weapons and scientific developments lies in our efforts to exploit the use of atomic weapons on the battlefield, and to prepare to defend against them.

The Army today is engaged in an extensive program to adapt itself to atomic warfare and to prepare both offensively and defensively for the impact of atomic weapons. We are providing field commanders with technical information; our troops are being trained to protect themselves against atomic blasts; and our service schools now give courses in atomic warfare.

We have concentrated on the speedy development of an atomic artillery piece, because our problem lies in being able to place fissionable materials relatively close to our own front-line troops under all conditions of weather and visibility and sometimes on fleeting targets of opportunity. It is a means of delivery which has been completely proven over many years and it is the first means of battlefield delivery under all weather conditions which we can get in the hands of troops. This 280-mm. gun can fire with accuracy comparable to conventional artillery at the relatively short ranges. It is four times more accurate at the longer ranges. It is a weapon that gives us the accuracy and dependability we must have.

This artillery piece, which can fire both conventional and atomic shells, is not much larger than some of our World War II guns and is even more mobile. It can cross bridges capable of carrying any standard piece of equipment in an ordinary Army division. Moreover, it can travel at a rate of thirty-five miles per hour, has excellent cross-country mobility, and can debark over unprepared beaches from a Navy landing utility ship. Once it reaches a designated firing location, it can be emplaced and put into action with greater speed than any other heavy field artillery piece now in use. The gun is so well balanced

that one man can easily elevate or depress it by hand if the power unit fails.

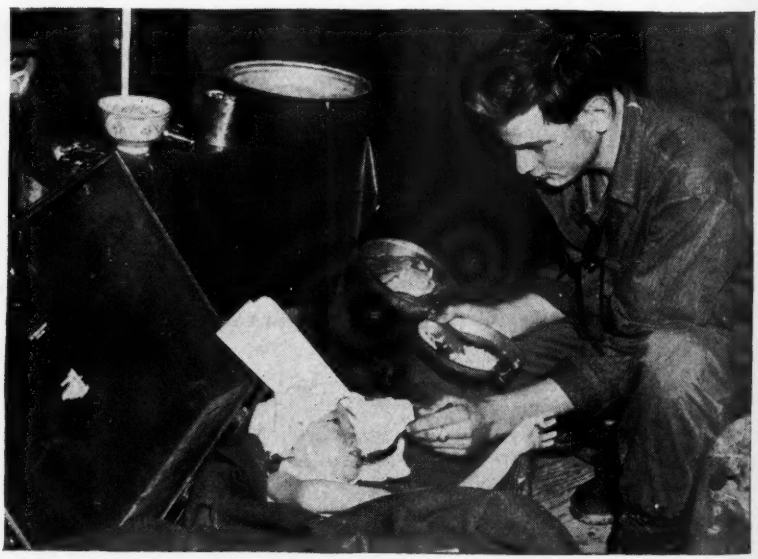
Ultimately, as guided missiles are perfected, they will also aid in delivering fissionable materials by the Army in close support of Army forces. But the important thing is that we have the gun *now*. We want our field commanders to have the capability of being able to use atomic explosives safely and accurately in darkness or in bad weather.

Closely allied with our progress in atomic artillery is our advance in guided missiles, not only the antiaircraft type but the artillery type—surface-to-surface. These missiles can carry either conventional explosives or an atomic warhead. Their all-weather characteristic is most vital to Army operations in the field and their great range makes them capable of hitting any part of an entire corps front. Recent tests indicate that we will have such missiles in the hands of our soldiers in the not-too-distant future. The development of guided missiles, particularly when combined with our progress in atomic weapons, is a tremendous step towards a truly modern Army ready to contribute a formidable defense to the free world.

Today, with so many advances being made in the mechanical tools of war, there is a tendency on the part of some to overemphasize the importance of machines and to underestimate the importance of man. But the true value and importance of these tools to defend our freedoms depend finally upon the skill, the courage and the conviction of the men who use them. Men will always be more important than machines, and on the battlefield men will always determine the issue.

Equal attention is therefore being given to problems of human relations and leadership. Science and industry advance into new eras but each generation must learn anew the strengths, the weaknesses and the limitations of men. If we—soldier and civilian alike—can devote more and more effort to the study of man himself, we will ensure that our material gains will benefit man, not destroy him.

Screening of natives by South Korean and American Military Police prevents infiltration by guerrillas posing as refugees. U. S. Army Photograph



While waiting evacuation at an advanced airstrip, a badly burned Korean boy is cared for by an Army medical aid man. U. S. Air Force Photograph

CIVIL ASSISTANCE IN KOREA

MAJOR WILLIAM B. KOONS

SWARMS OF REFUGEES clogging inadequate roads create an immediate military problem for tactical forces. Add to this devastated villages and cities, ruined factories, wrecked transportation facilities, abandoned farmlands, and the entire economic, social and welfare plight of a war-torn country may well become desperate. When the country is South Korea, small in area, never great in natural or manufacturing resources, the problems probably are more acute than in any previously recorded war. It is to cope with them that the United Nations Civil Assistance Command, Korea, (UNCACK) was formed.

When war struck in Korea in June 1950, millions of people—the old, the infirm, the young—streamed down every road, trail or path in an endless procession to the south. They overflowed the highways and poured into already badly overcrowded cities. Swirling through combat areas, jamming up at important military assembly points, they became an immediate problem for the United Nations Forces, then a long-range one for the Republic of Korea and the whole United Nations. As a human problem they had to be cared for; as a military problem they not only hindered troop movements but they shielded infiltrating guerrillas and therefore had to be carefully screened.

The immediate problem of feeding and sheltering the refugees was met by Civil Assistance sections of the combat echelons. Shortly, by a co-ordinatd effort of the military, the United Nations and the government of the Republic of Korea, the United Nations Public Health and Welfare Detachment (UNPHWD) was organized as an integral part of the fighting force of the Eighth United States Army in Korea. Its basic mission was to prevent disease, starvation and unrest.

But it soon became apparent that along with the refugee problem itself was the mounting and increasingly complex one affecting the entire economic, financial and industrial structure

MAJOR WILLIAM B. KOONS, Infantry, is Assistant Public Information Officer, United Nations Civil Assistance Command, Korea.

of South Korea. As a first step toward a solution, the United Nations Korea Reconstruction Agency (UNKRA) was established to extend post-war assistance to the Republic. While initially this agency had no authority to function in Korea during the period of hostilities, it could and did build up a considerable staff of experts in appropriate fields. As a result of a Memorandum of Understanding drawn up by the United Nations Command and UNKRA, the latter agency is presently engaged in certain economic rehabilitation projects.

Personnel to staff the newly formed UNPHWD were supplied by the military forces in Korea or hastily summoned from the Military Government organization in Japan. A small detachment at most, the men worked against discouraging odds in their fight against disease, the threat of starvation and the possibility of widespread unrest among the confused, homeless populace. By November 1950 it became apparent that its scope of operations would have to be broadened to include assisting the war-ravaged country in its immediate economic plight. Consequently UNPHWD was elevated to a command and became the United Nations Civil Assistance Command, Korea (UNCACK).

In addition to the original mission, the new command was given the responsibility of encouraging the rebuilding of Korean commerce and industry. The task which at the beginning was largely direct relief—safeguarding health, feeding, clothing and sheltering the refugees—has broadened to include rehabilitation and rebuilding phases in co-ordination with UNKRA. In actual practice direct relief and rehabilitation projects merge almost imperceptibly. Thus the original task of safeguarding the health of refugees has been expanded into a broad program for the entire population. The problem of providing food at the relief level merges into longer-range measures for rehabilitation of farm lands, importation of fertilizer, teaching improved farming methods and generally raising the level of Korean agriculture.

The structure of UNCACK parallels that of the government of the Republic of Korea since it must necessarily co-ordinate every activity with the country's own efforts. The operation is not comparable to military government as set up for Germany or Japan because the Republic of Korea is a sovereign nation. So UNCACK provides only assistance and advice in support of the country's own job of relief, recovery and reconstruction.

Korea, however, has little with which to rebuild. Many of its cities are rubble and most of its capacity to produce is destroyed. Its currency is deflated. Its electric power production, small to

begin with, was practically ruined. Transportation facilities are used almost entirely for military purposes and are inadequate for any reconstruction that can now be attempted. The few manufacturing plants that still exist must be supplied with raw materials. Fuel is scarce and much of the food must be imported.

To assist the Republic of Korea in coping with all of these problems, UNCACK maintains headquarters in Pusan. Field work is carried on by nine provincial teams, one island team, four sub-teams and three truck companies. Comprising personnel from eighteen United Nations countries, these UNCACK staff members have often been called "Warriors Without Weapons." Actually they use a wide range of professional skills in lieu of combat arms.

Civilian personnel are United States Department of the Army employees or those serving on loan from UNKRA. Military personnel are officers and enlisted men of the United States Army, most of whom have had similar experience in Europe or Japan. The civilians all are hand-picked for their knowledge of government service in foreign fields. They wear Army clothing, take their meals at Army messes and generally revolve in the orbit of the military.

Because UNCACK must operate in close liaison with the Korean government, its headquarters is situated on picturesque Suyong Bay about five miles from downtown Pusan. From here is directed the war against disease, starvation and unrest.

UNCACK staff members form an impressive cross-section of specialists and technicians of the free world. A Peruvian engineer is supervising repairs to the four big water systems in Seoul. A Thailand expert is in charge of water purification. A Syrian physician is chief of UNCACK's Public Health Section and his staff includes British, French and Mexican doctors. There are public welfare experts from Australia, Belgium, Denmark, Greece, India, Norway, Scotland and the Philippines.

Since it functions as a military unit, UNCACK has been able to utilize certain military specialists for medical relief work. One such team, a five-member surgical group from the Danish Red Cross Hospital Ship *Jutlandia*, organized the National Relief Hospital at Taegu in 1951. There the team performed more than five hundred operations, treated thirteen hundred bed patients, and many hundreds more in an out-patient clinic. The hospital which it established is now operated by Korean medical personnel trained by the Danish surgical team. Another group—a Red Cross hospital unit from Italy, the only non-United

Nations country to send personnel to Korea—operates a complete mobile hospital near Seoul, staffed by seventy doctors, nurses and corpsmen.

The tide of refugees began moving southward as soon as hostilities broke out. By late 1950 hundreds of thousands were squeezed into the Pusan perimeter. When the United Nations forces drove back to the 38th Parallel, the reverse flow began, creating new problems since many refugees could not be allowed to return to their homes in the immediate combat zone.

When the Chinese Communists swarmed across the Yalu River another and greater refugee movement southward began. Many thousands were evacuated by ship from the Hungnam area and were brought to Pusan. There the situation was indeed serious. Every building was crowded to bursting. People slept in relays. Water became a precious commodity that was sold in the streets. Similar scenes were being enacted in other cities south of the battle lines. At the height of the refugee flood, some ten thousand persons were being received, dusted for vermin, inoculated, provided with emergency rations and shipped to camps every seventy-two hours.

Although conditions have since been stabilized to some extent, the refugee problems still exist. Those who cannot be rehabil-

Men and women of Korea pitch in to clear rubble from war-torn streets in their liberated cities. United States Information Service Photograph

itated must be cared for and the economy of the country must be helped. In order to place at least a portion of the refugee population on a self-sustaining basis and to take up slack of local unemployment, it has been necessary to repair, rebuild and re-equip essential industry. UNCACK technicians, working with their Korean counterparts, have achieved considerable success in putting mills, factories and power plants back into production. But merely getting them into operation is not sufficient since there is always the problem of supplying raw materials, then of restoring markets, transporting the products to those markets and establishing a firm credit structure in order to keep the entire economy operating.

The job of providing for the physical needs of the people takes precedence. From the very first, safeguarding health—and thereby preventing spread of disease among civilian and military alike—was paramount. In all of the grim months of see-saw war, when people by the thousands were exposed to extreme heat or freezing cold with little or nothing to eat, there has not been a widespread epidemic. Outbreaks of disease have been located and quickly arrested.

White-coated UNCACK and Korean doctors and nurses worked day and night during the early hectic months. Wherever lines of refugees converged or a group gathered, a dusting and immunization center was set up. Almost automatically the refugees would fall into line for dusting with DDT or for inoculations against typhoid, typhus, smallpox and cholera.

Since then there has been no slackening in medical activity. The sick, injured and wounded were first cared for in hastily established hospitals, surgical units and dispensaries which handled more than two and a half million patients initially. Now a nation-wide program insures that every person in South Korea receives smallpox vaccinations and typhus "shots" at required intervals. Koreans are being indoctrinated with the idea of maintaining permanent "shot" records, Army-style.

The results are already apparent. During the first six months of 1952 the number of smallpox cases was 98 percent lower than during the same period in 1951. Typhoid incidence was reduced by more than 96 percent, while deaths from this disease numbered only 3 percent of those in the first half of 1951.

Two types of modern medical units supplied by UNCACK help serve Korea's medical needs. One of these is the Basic Medical Unit; the other is the Forty-Bed Hospital Unit. The first is equipped with drugs, surgical and medical supplies suf-

ficient to give medical support to a population of a hundred thousand persons for a month before being restocked. These units are operated by Korean medical personnel under UNCACK supervision. There now are two hundred and eighty of them in operation and a thousand more are planned.

More elaborate is the Forty-Bed Hospital Unit, of which forty-one are now being operated. Each one has the supplies necessary to equip and operate a full surgical hospital. More of these units are being planned.

Closely allied with primary medical care are the problems of feeding, clothing and sheltering the homeless. UNCACK has placed great emphasis on caring for lost, abandoned and orphaned children in refugee camps and has managed to reunite many thousands of families. But other thousands are homeless waifs whose parents or families have been killed or imprisoned or are missing. About fifty thousand of these have been placed with relatives or friends while twenty-five thousand more are being cared for in two hundred and seventeen orphanages that have been established.

Maintaining the devastated country's food supply is another pressing problem. Korea itself is predominantly an agricultural nation and even in the midst of war, if a Korean can get to his land he plants it. The country had expected to be self sufficient in rice and grain production by 1950. But the tide of war rolled over much of the richest rice growing areas. Early in the fighting UNCACK was faced with the problem of feeding not only refugees but a large part of the South Korean population. Today the problem is to get the farms back into production, meanwhile supplying what food is necessary to make up the deficit. By the spring of 1952, more than half a million displaced persons had been returned to their land in the two west coast Cholla provinces. They took with them seed grain, farm tools and a supply of food to tide them over until harvest. This movement started a vast resettlement program which by fall had seen many thousands of refugees returned to their homes.

The Korean land, tilled for centuries, needs constant revitalizing. While the age-old custom has been to use "night soil," the use of commercial fertilizer was steadily increasing until the war knocked out most of Korea's factories. Now fertilizer must be imported. A total of 143,800 metric tons has been supplied through UNCACK and about twice that much is programmed under present plans. Barring unforeseen drought or other adverse weather conditions, the spring of 1953 should show suffi-

cient gains to permit a reduction in importation of foodstuffs.

Fishing, like agriculture, is important to Korea. To restore the industry, UNCACK has concentrated upon building and expanding the fishing potential. Repair parts were supplied for fishing vessels; abaca fiber for making fishing nets was imported; ice plants were restored to use. Every effort is being made to build up this industry to permit the earning of valuable credits in the export market.

Food, clothing, bedding and household supplies vitally needed by the homeless of Korea come not only from UNCACK but from official funds and through donations from some eighteen social service organizations. These groups have contributed thousands of tons of supplies. Children's agencies have sent clothing and gift boxes to the small victims of war—donations which have helped materially not only to keep them alive but to brighten their lives and create hope for the future. In all relief disbursements, great care is taken to import nothing which can be supplied in sufficient quantities by Korea itself.

Supplying shelter after the initial establishment of camps has meant largely rebuilding. Best estimates are that more than four hundred thousand Korean dwellings have been destroyed. Much of the reconstruction has been put squarely up to the

The United Nations Civil Assistance Command distributes blankets to protect Korean children during winter months. U. S. Army Photograph

Korean orphans try on used clothing sent to their country by allied welfare organizations. United States Information Service Photograph

Koreans themselves and they have responded with enthusiasm. Along with building their own new homes, they are swiftly building new schools. Often teachers, parents and children get together in the spirit of the American pioneer era and pool their work. Some concept of the rebuilding job that is being carried on may be obtained from the fact that so far more than sixty-five million board feet of lumber will be used—and of this nearly fifty million feet have been brought in and allocated. Nearly half a million square feet of glass, two million pounds of nails and over eighty thousand long tons of cement will be utilized. Of these, large amounts already are being used.

These relief activities cost money—$528,548,051 up to 30 June 1952. It comes from Department of Army funds appropriated by the Congress, through donations from United Nations member countries, from private welfare organizations, and by purchases through the Economic Co-operation Administration (ECA). Of the supplies actually delivered, the United States contribution was approximately 96 percent.

Allocation of goods and materials expended under the civil relief program is supervised and generally administered by a Combined Economic Board, established as part of the Agreement on Economic Co-ordination concluded in May 1952 between the

Republic of Korea and the United Nations Command.

Problems of rehabilitation are complicated by the needs for establishing a sound currency and credit structure for the country. Never an easy problem to cope with, inflation is plaguing economists and financial experts striving for a solution.

Because Korea has practically no forests and produces little coal of high grade, virtually all fuel must be imported. Charcoal is a favorite for both homes and small industries but it costs about $112 a long ton to import it. UNCACK is attempting to build up popular demand for petroleum coke which can be handled much more cheaply. Emphasis is also being placed on mining of peat from Korea's extensive bogs. Approximately 250,000 tons of this fuel were mined in 1951 and a goal of a million tons has been set for 1953.

Electric power, so necessary to industrial rehabilitation, has posed a considerable problem. Much of South Korea's power originally came from plants located north of the 38th Parallel. In 1948 this supply was cut off by the Communists. Stand-by steam facilities were pressed into operation and renovation of power plants was given top priority, but by 1950 the peak production was only about eighty thousand kilowatts. Destruction or damage to electric plants during the fighting cut that to an all-time low of sixteen thousand kilowatts. To augment the output of local plants, two floating power barges were stationed along the coast. By mid-1952 UNCACK was able to announce a 400 percent increase in electric power output.

Korea today is rising out of the shambles wrought by a cruel and ruthless enemy. Members of the Republic of Korea staff have worked unstintingly alongside the experts of UNCACK in the joint mission of relief and reconstruction.

These "Warriors Without Weapons" are using food, clothing, medical supplies, building materials and fuel as ammunition in their war against disease, starvation and unrest. Meanwhile the Korean people in every city, village and hamlet have seen the hand of friendship reaching out to them. Their plight is known and understood—of that they are certain. Somewhere in the future lies the solution to their country's problems and their individual problems. If the United Nations Civil Assistance Command, Korea, has anything to do with that future, it carries a great deal of hope.

Army aviation engineers and Korean laborers complete the flooring for a new hangar at a jet fighter base. U. S. Army Photograph

AVIATION ENGINEERS DO THE GROUNDWORK

PRIVATE FIRST CLASS CHARLES W. VOSS
AND
AIRMAN FIRST CLASS SEDGWICK R. BYRON

WHEN SWIFT JET FIGHTERS or huge bombers take off into the Korean skies, or when they land after a mission that makes the headlines in next day's news, they do so on stout runways built by men who rarely achieve mention in the public prints. Yet those men and their work are vitally necessary before the warbirds can ever take to the air. The story of their achievements is also a tribute to inter-service co-operation between the Army and the Air Force.

These are the Aviation Engineers—the men who build and maintain the runways, taxiways, parking ramps, drainage systems, buildings, water lines, roads and fuel storage tanks that make an airfield a going concern. Most of them are engineers, but some also serve in signal units. All are known as SCARWAF —Special Category Army (Personnel) with Air Force.

Their story actually begins in 1947 when the Department of the Air Force was established as a separate entity under the National Security Act. The newly constituted Air Force had no engineering units; and the old Army Aviation Engineers were left without a market for their specialty. The logical result was SCARWAF, Army personnel assigned for special work with the Air Force.

Although this sizable group of Army personnel performed essential work world-wide, many newcomers in the service after 1947 apparently never even realized that this large group existed. Advancement of SCARWAF personnel was administered by the Air Force until July 1951 when promotional control was returned to the Army and the training program was expanded.

Today Aviation Engineer units are organized, manned and given their initial training by the Army. They then go to the

PRIVATE FIRST CLASS CHARLES W. VOSS, USA, is a staff writer in the News Division, Eighth United States Army, Korea; AIRMAN FIRST CLASS SEDGWICK R. BYRON, USAF, is assigned to the Fifth Air Force Public Information Office.

Army aviation engineers and Korean laborers complete the flooring for a new hangar at a jet fighter base. U. S. Army Photograph

Air Force for specialized training, becoming part of the Aviation Engineer Force (AEF) with headquarters at Wolters Air Force Base, Texas. Training is also given at Beale, Orlando and Eglin Air Force Bases, Florida. All together, there now are more than twenty-four thousand enlisted men, twelve hundred officers and about two hundred warrant officers in SCARWAF units.

The Fifth Air Force's 417th Engineer Aviation Brigade is headquarters for all Aviation Engineer activities in Korea. Ten battalions and three Engineer Aviation Groups also are serving there. Typical of these is the 811th Aviation Engineer Battalion, first elements of which landed at Inchon just nine days after the invasion of 15 September 1950. Men of that battalion pitched in immediately and have been hard at work building airstrips ever since.

A rock crushing mill is set up to provide essential construction materials.
U. S. Air Force Photograph

Their most recent job is considered a construction miracle of the Korean conflict—a 6200-foot springboard to Mig Alley, wide enough for two Sabrejets to take off wing to wing, and completed in just twenty-five days. Men of the battalion claim the elapsed time would have been even less had it not been for the tail end of two typhoons that struck the area, pouring more than six inches of water onto the field. When it was not raining, the workers sweltered in temperatures well over the

100° F. mark. The runway is designed to last at least seven years without major repair. When it is considered that jet fighters land with twice as much impact as a four-motored piston-type transport, that is indeed a long life as runways go.

Although considered a triumph in field engineering, the runway is by no means the longest built by SCARWAF in Korea. Early in 1952 the three battalions of the 930th Engineer Aviation Group constructed a 9000-foot strip.

When Aviation Engineers start a job, they usually spend twenty-four hours a day at it, working under floodlights at night, even foregoing trips to the company kitchen or mess hall. Trucks rush hot food to the men at work. Sometimes the paving moves ahead so rapidly that the battalion must borrow extra trucks, and mechanics must repair their equipment in odd moments snatched from their paving duties. Surveyors work as long as there is light. Many of the engineer soldiers even sacrifice hard-won rest and recuperation leaves in Japan in order to get rush jobs completed.

When laying down new airstrips, the engineers concentrate on completing one half the width in order to make that portion available as quickly as possible to the fighters and bombers. Sometimes, as in the case of the huge 9000-foot job, the strips are laid alongside smaller existing runways so that there is no interruption in air activities.

Sometimes the engineers start from scratch to turn a Korean swamp or jumble of rice paddies into an airfield. At other locations, they rebuild former Korean commercial fields into first class fighter-bomber bases. The work is never finished. Temporary installations must be replaced with permanent ones. Taxiways and storage facilities have to be enlarged. Runways need patching. No sooner had the 811th completed their record-breaking runway job than they began work at two fields on a 4500-foot asphalt runway for transport planes, an 1800-foot taxiway, a huge hangar, a 3000-barrel fuel tank and a few radar installations and parking areas.

The engineering tasks require heavy equipment, trucks, scrapers, bulldozers, rollers, graders, shovels, cement mixers, rock crushing units, ditching machines, bucket loaders, to name but a few. The tasks also require large amounts of asphalt, crushed stone, sand, dirt, cement and timbers. To assure an adequate supply of such materials, the engineers have set up their own rock quarries, sand pits, river gravel pits, rock crushing plants and asphalt plants. Soldier-lumbermen cut local

timber for the engineers. Steel, concrete and asphalt are the only construction materials which are imported—steel from the United States, concrete and asphalt from Japan.

But while machinery and construction supplies are indispensable, still more essential are the men who transform those materials into finished air bases. SCARWAF soldiers get the same three rotation points a month that Air Force men receive, so that a year is normally the maximum time any aviation engineer remains in Korea. Personnel officers have been hard pressed to obtain sufficient trained personel as replacements. A stepped-up program for training SCARWAF men in the zone of interior is aimed at relieving this situation. At present there is a scarcity of surveyors. Consequently any engineer recruit who shows an educational record or aptitude along mathematical lines is regarded as a find. Men trained in operation of heavy engineer equipment are also being sought.

The problem is being solved in part by on-the-job training programs. Three such programs now are being conducted by the 811th Battalion. Men with little or no experience are being transformed quickly into operators of complex equipment. Experienced operators instruct the new arrivals who will be their replacements when they become eligible for rotation.

Much of the heavy work is handled by Korean contract laborers. Under the supervision of skilled technicians, they do everything from digging ditches to running rock crushers. Eager and quick to learn, they supply the brawn that makes the difference between getting a job done on time or well ahead of schedule. (See "Engineering Training for Koreans," December 1952 DIGEST.)

Parts replacement still strains the mechanic's ingenuity, but the engineers today are a great deal better off than two years ago, when they had to build airfields with equipment that had already seen rough service during World War II. No job is too big for these Aviation Engineers to tackle as they continue to give United Nations flyers the best possible home bases within striking distance of the enemy.

THE COAST GUARD'S ICEBERG PATROL

CAPTAIN GARRETT VAN A. GRAVES

IN THE SPRING of 1912, the world was shocked by one of history's worst sea disasters. In the pre-dawn of 15 April the sharp underwater edge of an iceberg ripped the hull of the *Titanic*, and the largest and finest ocean liner of her day sank with a loss of 1635 lives.

While icebergs do not make such tragic news any more, they have not disappeared. These white giants of the north are still very much with us, especially in the North Atlantic during the spring and summer. Each season they drift across the ocean lanes, just as much a menace today as they ever were. But since the establishment of the International Ice Patrol, a direct outgrowth of the 1913 International Conference on Safety of Life at Sea, shipping has been forewarned and casualties have been averted.

Of all the hazards which the seafarer must face there is nothing more formidable, more unyielding, more treacherous than ice. It has destroyed entire fleets of ships and obliterated all traces of expeditions. Unlike hurricanes, icebergs do not herald their presence with dark clouds and falling barometers. Unlike reefs and shoals, they cannot be marked with lighthouses or buoys. These huge masses of solid ice skulk along, hiding most of their treacherous bulk under the waves. Even radar, the modern lookout, finds their smoothly washed and often rounded sides hard to pinpoint.

Icebergs are the past come to life. Conceived when snow fell on the great polar ice caps thousands of years ago, they are born of the glaciers, the rivers of ice which move slowly down from the ice caps and "calve off" huge chunks into the sea. Greenland's ice cap with its hundreds of glaciers produces tens of thousands of icebergs each year, but relatively few of these ever reach positions of menace to the shipping lanes.

CAPTAIN GARRETT VAN A. GRAVES, USCG, was Commander of the 1952 International Ice Patrol.

USCG Acushnet stands by an iceberg to warn approaching ships of danger.

U. S. Coast Guard Photograph

The ocean currents which carry the bergs travel strange paths through the Arctic seas. They flow down the east coast of Greenland and up the west coast. Then they turn south, flowing down the coast of Canada and Labrador. Finally they arrive off Newfoundland over the Grand Banks.

The journey of the icebergs may take years or even decades. Wind-driven currents may carry them into shallow water and ground them. Fields of Arctic pack ice may trap them, leaving them to travel aimlessly with the wind like fleets of Flying Dutchmen. Nibbling constantly at their sides, the waters attack them and they shrink in size. By spring when the frozen northern seas thaw and break up, an average of four hundred and fifty icebergs reach the vicinity of the Grand Banks. This figure varies widely from year to year, from as many as a thousand in one season to as few as twenty in other years.

Upon arriving off Newfoundland, the iceberg becomes a menace to ships. All trans-Atlantic shipping taking the shortest route between the United States and Europe must cross the Grand Banks, an area of the heaviest and most extensive fog in the world. Here in this maelstrom of fog, ships and icebergs, disaster awaits the unwary. At this point, though, the life of an iceberg is fortunately short. The warm Gulf Stream water into which the Labrador Current ultimately mixes, the summer air and the absence of the ice pack which normally provides protection against the buffeting waves make the berg's survival only a matter of weeks. Even so, some icebergs have drifted as far south as Bermuda.

It is popularly imagined that icebergs can be destroyed quickly by gunfire or dynamite. But nature which took thousands of years to build an iceberg still laughs at man's efforts to destroy one. Gunfire has little or no effect and since bergs may capsize or split apart without warning, men dare not risk boarding them to lay dynamite charges. Ships have tried and failed to tow or push them out of the way. Ramming them is usually futile unless they are already in their final stages and rotten with slush; then a strong hulled vessel can break them into smaller pieces and hasten their destruction.

For all practical purposes, only nature can destroy them. Man can only seek them out, watch them carefully and patiently and estimate their course. This is the job of the International Ice Patrol.

The year after the *Titanic* sank an international conference convened in London to find out what could be done about the

iceberg menace. Many other ships had met the same fate but now the world was aroused to the danger. As a result of the conference, the International Ice Observation and Ice Patrol Service of the North Atlantic was formed. The United States was invited to operate the patrol whose expenses were to be borne by the fourteen participating nations. Since 1913 the Coast Guard has been the operating agency for the United States Government. Under an international agreement reached in 1948, contributions toward the support of the Ice Patrol were changed from a fixed percentage to a percentage based on each nation's tonnage of merchant ships traversing the ice area.

For many years the Ice Patrol consisted of a fleet of Coast Guard cutters which remained at sea during the danger seasons. They searched the area and warned passing ships. When a particularly dangerous iceberg was found, a sentry ship was posted day and night. At present, however, virtually all reconnaissance is by air, and surface craft are called out from station only when needed.

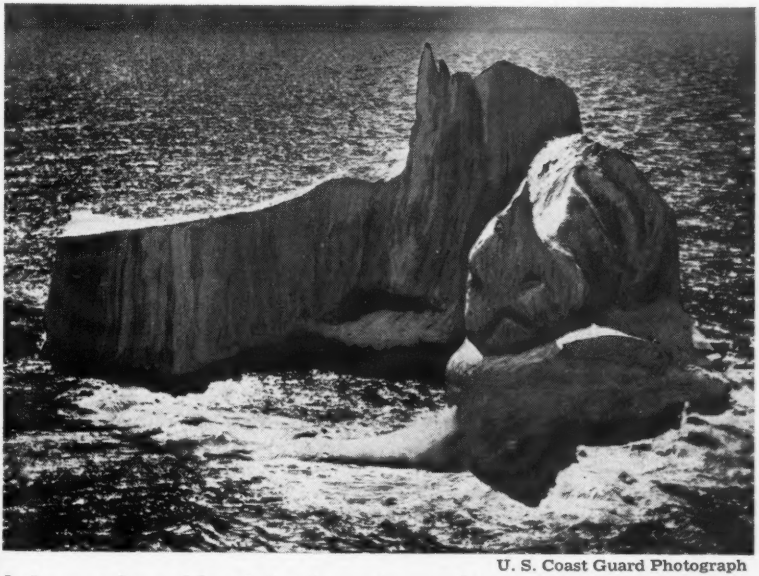
Today's patrol cutters are single-screw, electric turbine powered ships especially designed for their work. Each carries a complement of fifteen officers and one hundred and eight enlisted men. Patrol vessels of the large cruising cutter class are also assigned from other Coast Guard duties when necessary.

With the recession of the ice menace during the late summer months, activities of the Ice Patrol are discontinued and participating units return to their permanent stations. Key staff members are then assigned to the Oceanographic Institution at Woods Hole, Massachusetts, where they co-operate with other marine scientists in an intensive study of ocean currents and ice conditions.

Whenever the ice again begins to threaten the steamship lanes—usually early in March—the patrol resumes its vigil in a region east and south of Newfoundland covering an area about the size of the state of Pennsylvania. Even with an augmented force, the vastness of the area would challenge the patrol if other methods were not used. An oceanographic survey vessel has been added to the patrol to explore critical areas and chart the ocean currents. With this increased knowledge the course of drifting icebergs can be predicted and search vessels dispatched more efficiently.

The oceanographic vessel USCG *Evergreen* makes twenty-day cruises each month during the ice season. Its crew maps the North Atlantic currents by determining the distribution of sea

water of different densities. Samples from depths of as much as three quarters of a mile are used to determine variations in temperature and salinity. A recently developed instrument, the geomagnetic electrokinetograph, measures the flow of ocean current by means of electric voltages set up in salt water on the principle of an electrical conductor moving through the earth's magnetic field. From these minute computations, charts of ocean currents similar to weather maps are drawn up. Research is centered on the Labrador Current, but studies are also made of the Gulf Stream, heartbeat of the North Atlantic, which somehow mysteriously influences the activities of the Labrador Current.



U. S. Coast Guard Photograph

Icebergs sculptured by wind and wave frequently assume weird forms. Mouth and eyes are discernible in the snail-shaped behemoth at right.

Since the development of long-range aircraft, the Ice Patrol has used planes successfully. Its two B-17 Flying Fortresses have a great advantage over the cutters. They cover a wider area in a shorter time and greatly reduce the cost of operations.

Radar, too, has been used to detect icebergs. But it is not reliable, as tests have shown, against the most treacherous kind of iceberg—the kind that lies awash with its bulk almost entirely submerged.

From its headquarters and radio station at Argentia, Newfoundland, the International Ice Patrol keeps in constant touch

with planes, cutters and merchant ships in the Grand Banks area. It carefully analyses reports of iceberg sightings to determine present and potential dangers. When more specific information is needed, it may send a radio query to a merchant ship in the vicinity. Several times each day it broadcasts routine information on ice hazards in the shipping lanes.

At headquarters, the positions and routes of merchant vessels traveling across the Banks are charted, together with the positions of all dangerous ice. The patrol commander thus has at hand a complete picture of the situation. If necessary, he orders aircraft to patrol areas where he feels the ice picture is obscure or dangerous. Cutters are dispatched to foggy areas where aerial reconnaissance is ineffective.

The commander also determines which areas the oceanographic vessel will survey and from the findings he calculates the points of greatest potential hazard. If necessary, he recommends to the North Atlantic Track Authority that the assigned international steamer lanes be shifted southward ahead of schedule; on the other hand, if hazards are few, he may recommend that the northern lanes, which are shorter and more economical, be kept open.

A product of international co-operation toward the unselfish goal of preserving life and property on the high seas, the International Ice Patrol has achieved an outstanding success which is best measured by the fact that, except during World War II when the Patrol temporarily suspended its operations, no collision between a ship and an iceberg has been reported since the *Titanic* disaster.

THE RED CROSS IN THE FIELD

JOHN CHABOT SMITH

THE RIFLEMAN who found "poison pen" letters in his mail; the sailor whose allotment check was going astray; the airman who received word that his baby needed a serious operation—all these and hundreds of other personal problems plague servicemen daily. Every commanding officer knows that the resulting worries may reduce combat effectiveness almost as seriously as an actual casualty or physical illness. Yet the commander himself is usually powerless to handle such personal problems, nor has he the time or the facilities to follow through to their solution.

But to the Red Cross field director, the machinery for unraveling all of these personal problems does exist. Deftly he puts that machinery into motion. Usually the trouble is not nearly as grave as it seemed to the soldier or sailor or airman in Korea. But when it really is serious, when the emergency is such that it must be dealt with personally, then arrangements are made for an emergency leave, a compassionate transfer or re-assignment to a station nearer home. In some circumstances, discharge or release from active duty may even follow. But in every case ranging from emergency leave to actual discharge, military authorities alone decide whether or not a man goes home. The Red Cross merely investigates and reports the facts.

To obtain the necessary information accurately and impartially from the serviceman's family, no matter where they may live, and succinctly present it for disposition by the Armed Forces, requires a nation-wide organization of trained and experienced workers.

This is what the thirty-seven hundred Red Cross Chapters, covering every community in the Nation, are equipped to do. Requests for information are flashed to the Chapters from the field directors who serve every combat unit. The Chapters get

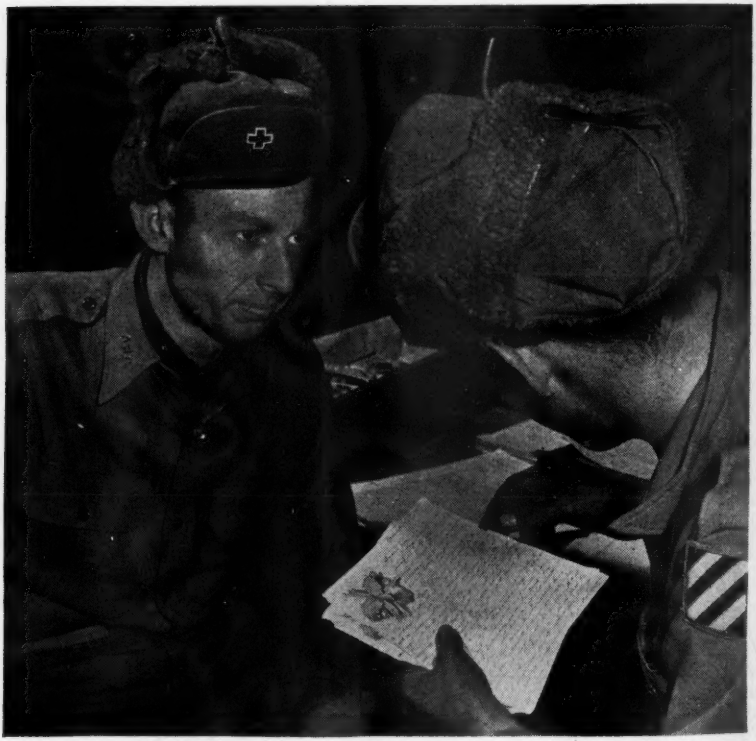
JOHN CHABOT SMITH is on the Public Information staff of American Red Cross headquarters, Tokyo.

in touch with the families, assemble the facts and supply the information back to the field.

It works the other way, too. Families can go directly to Red Cross Chapters in their home communities when an emergency arises. The Chapter then initiates action through Red Cross headquarters direct to the Adjutant General's Office in Washington for decision. Often such direct action results in emergency leave even before the serviceman at the front has heard of the home situation.

From the operational standpoint, the field director performs a liaison mission of almost impossible proportions. His scope of operations may extend to a forty-mile radius, over roads which in Korea range from hopeless to nonexistent. The main problem of the field director therefore usually is one of transportation and communications.

As far as possible the Red Cross organization in a combat



An assistant field director confers with a serviceman who has received word of a family emergency. American Red Cross Photograph

zone parallels the military chain of command. This parallel is not exact, however, because while the geographical location of many units cuts across organizational lines, the field director is necessarily concerned with geography. It therefore often happens that an assistant field director attached to a regiment will serve attached units stationed in his vicinity although they may be under direct command of division, corps or army. Small units in isolated rear area positions are served by the nearest Red Cross office, whether at an Army headquarters, a hospital or an Air Force base. Close co-ordination among Red Cross field offices is accomplished through the organizational relationships between the field offices, field supervisors and the Theater Headquarters at Tokyo.

The basic unit is the field office at each division where the field director maintains his tent at forward headquarters. Each field director has three assistants, usually serving at each of the three regimental command posts. Radio communications are channeled through the field director at division, who turns them over to the Signal officer for transmission through Army channels. Each field director reports directly to the division commander while the assistants report to the regimental commanders. Although civilians, they are under military control with an assigned mission and are dependent for logistical support on the headquarters to which they are attached.

Because just about every imaginable problem can beset a serviceman—and many which never were imagined do happen daily—the field directors and their assistants are selected with great care. All Red Cross field and hospital staffs are chosen for experience in professional social work or related fields; most are college trained, with a master's degree in social work required for hospital unit heads. Further, many of the men are World War II veterans who have an understanding of the psychology and outlook of servicemen. Many of them entered the Red Cross field after discharge because they had personally experienced the value of Red Cross service and wanted to help carry on the work.

Before being assigned to an oversea station the field director normally serves at least a year at a military installation in the United States. This usually includes duty on a maneuver. However, in order to meet the suddenly imposed needs in Korea the training and orientation period was often cut down.

Basically the work of a Red Cross staff member is the same whether in a combat unit or at a base in the zone of interior.

The men are the same and the problems are the same—although when overseas the problems appear more numerous and more complex and they loom up more gravely in the eyes of the serviceman. When he joins a combat unit the Red Cross man ceases to be an office worker and becomes a campaigner, sharing the difficulties, discomforts and some of the dangers of the men with whom he is working. He moves with his unit, forward or back as the fortunes of war require, and the rougher the action the more his services are in demand.

From a bunker in Korea, an assistant field director makes a call over an infantry regiment's field telephone. American Red Cross Photograph

While serving with a unit in the field, each director and assistant has assigned to him a jeep and driver and at division level—but not always at regiment—an enlisted man to act as clerk. To save time, as much as possible of the work is performed by telephone but when face-to-face consultation with men is required the assistant director goes to them.

Normal procedure in handling interviews in front-line units is to arrange with the company commander for the individual concerned to report to the company command post. This gives the serviceman more privacy and undisturbed time to discuss his problem. The Red Cross representative is not expected—and in fact is forbidden under international law—to become involved in combat; he is not trained for it and his presence

in an exposed position is likely to endanger the lives of others as well as his own.

That does not mean, however, that field directors never are exposed to danger. They realize that it can be a boost to the morale of a front-line unit if they climb that hill to confer with a man in his foxhole, to tell him about the birth of a baby or just to pass out stationery or razor blades. Recently an assistant director serving with the 17th Infantry Regiment in Korea took a wrong trail and found himself advancing into enemy territory until headed off by a patrol. Another Red Cross worker was killed by enemy artillery while serving as assistant field director with the 15th Infantry Regiment. The serviceman he was interviewing was severely wounded by the same round.

That serviceman, and hundreds of others like him, found a Red Cross representative in the hospital to which he was removed. There the same social services are rendered and in addition an extensive recreation program is carried on. The uniformed Red Cross girl takes care of personal needs, helps write letters home—often difficult for a hospitalized man who has little actual news to relate—does shopping errands and performs a multitude of other tasks that help maintain morale. If the man has a personal or family problem, she enlists the aid of his hometown chapter. As a result, the wounded man is made to feel that somebody is taking a genuine interest in him and he more readily forgets his own troubles.

All of these things the wounded man appreciates. But what he generally does not realize is that the Red Cross girl is reviving his interest in life, making him want to get well. In so doing she is combating that troublesome ailment known to Army medical officers as "hospitalitis." This is a form of institutionalism frequently found among the sick or injured, a kind of protective mechanism that often leads the individual to develop imaginary symptoms in order to put off the day when he must leave. Civilians normally have the comfort of family and friends but in military hospitals such attention usually comes only from the Red Cross.

Each hospital in Korea has its own Red Cross office with staffs ranging from one to four girls depending on the size of the unit. Each unit head reports to a hospital supervisor whose office is in Tokyo but who periodically visits each installation. Where relationships with the military command involve going outside hospital channels or when a patient requiring further assistance in family problems is discharged

from the hospital, the staff head refers the case to the appropriate field director.

Each field director at division headquarters is responsible for administrative supervision of his three assistants; he also provides service for division headquarters units and others in his area. At corps headquarters a field director and assistant are provided while at Army headquarters there is usually a staff of two assistants and three secretaries in addition to the field director. In Korea the field supervisor has his office at Army headquarters. He represents the Red Cross in dealing with the Eighth Army command and has administrative super-

Articles for free distribution to patients in a Mobile Army Surgical Hospital are delivered by a Red Cross representative. American Red Cross Photograph

vision over all Red Cross field offices in Korea except those of the hospital service.

From its Tokyo headquarters the Red Cross directs activities of all field and hospital staffs in Japan, Okinawa and the Philippines as well as Korea. A Red Cross Locator Service is also maintained in Tokyo to determine promptly the location of any serviceman and the appropriate Red Cross office to which communications about him should be directed. Although set up originally to facilitate Red Cross work, it is widely used by newly arrived servicemen to find friends or relatives in the Far East Command.

Not only in Korea today, but wherever American troops may be found, there is a Red Cross field director or his assistant at the soldier's service. He is there to safeguard the rights and interests of the citizen soldier and to assist in problems which may beset him or his family—a service unknown in Communist armies. To reconcile this American concept of individualism with the hard facts of military life is no simple matter but the Red Cross trains its field directors for that complicated task. Besides rendering an essential social service, the field director helps build and maintain the morale of fighting men, thus making them better able to concentrate on the immediate task of fighting through to victory.

GATEWAY TO THE ORIENT

COLONEL WILLIAM J. DEYO, JR.

TO THE CASUAL VISITOR, the 2d Transportation Major Port in Yokohama, Japan, seems too placid to be an important battleground in the constant struggle to keep troops and equipment moving toward the Korean front. Yet the stream of soldiers and supplies moving through this giant transportation hub constitutes a major share of the United Nations logistical load.

Among the military contingents are mustachioed Greeks, swarthy Turks, brawny Canadians and polite little sun-tanned men from Thailand, not to mention the French, Belgians, British and Americans. After the troops come the mountains of supplies—food, clothing, guns, ammunition, tanks, trucks, gasoline and oil—which must be off-loaded and loaded again.

It is not unusual for a day at the 2d Port to call for berthing of several incoming ships, laden with Korea-bound soldiers and the wives and children of service personnel assigned to Japan. Meanwhile other transports weigh anchor and move out, carrying soldiers and dependents to the United States. A score of ships are tied up to harbor buoys, loading and unloading cargo, while trains of the Japan National Railway trundle in and out of the Port in a virtually unbroken line with troops, dependents and cargo.

COLONEL WILLIAM J. DEYO, JR. Transportation Corps, is Commanding Officer, 2d Transportation Major Port, Yokohama, Japan.

Through the giant main installation and four busy subports which cover more than one hundred miles of shoreline, the 2d Major Port receives, off-loads and loads again the endless chain of ships and trains. In this operation hundreds of American military and civilian supervisory personnel and thousands of Japanese workmen are engaged. Stevedores employed by huge contracting firms work twelve-hour shifts to insure that port operations keep pace with incoming and outgoing shipments. The local payroll of more than seven billion yen a year—equivalent to twenty million dollars—helps to bolster the economy of the Yokohama area. At the same time, it assures a dependable manpower pool which permits the release of American troops for duty in Korea. (See "Native Labor—the Army's Ally Abroad," January 1952 DIGEST.)

When the Korean warfare began, a primary impelling need was for more ships and more ships. The reserve fleet at the 2d Major Port then consisted of some two hundred and fifty vessels, many of which had been raised from the ocean bottom after World War II. Working as a team, the Japanese maritime industry and the Port authorities collected, repaired and re-equipped these "ghost" ships for battle. They were the LST's, LCM's and LCVP's which carried invading forces up to the

Air view of Yokohama shows the 2d Major Port harbor installations and facilities. U. S. Army Photograph

beach at Inchon and later pulled out our troops from Hungnam.

Japanese facilities in Yokohama, known as the Asano dockyards, made the conversion of these ships possible. Under contract to the Port, they still give Army ships priority in all repair and salvage work. Not long ago a fleet of LCM's came into the Asano docks for emergency repairs. They were put back in shape speedily—how fast is still restricted information—but the time set a record even for the 2d Major Port.

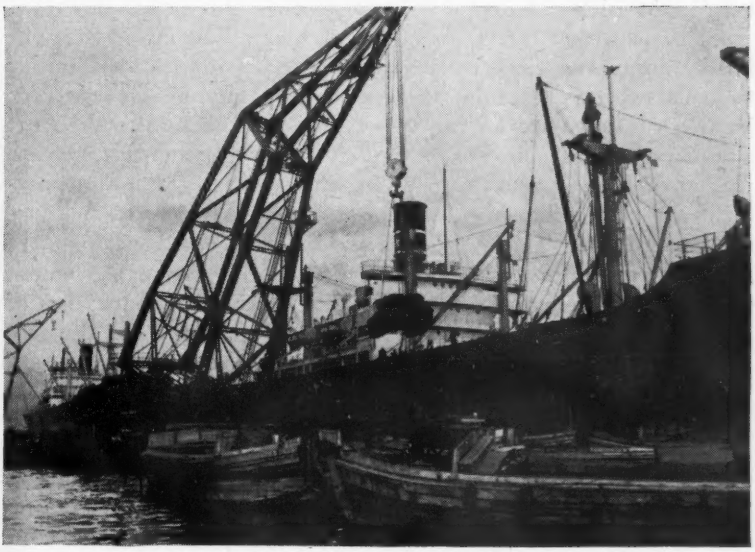
Canadian troops en route to Korea debark at 2d Transportation Major Port, Yokohama, Japan. U. S. Army Photograph

The fighting in Korea created a need for a second military port in the Far East. Soon after the first shots were fired, the 2d Major Port sent a cadre of men, a fleet of tugboats, floating cranes, J-boats and other harbor craft to Pusan, Korea. More than half were ships of the reserve fleet, hammered into working fitness at the Asano dockyards. To man these vessels, soldiers who knew little about the problems of harbor operations were trained almost overnight for new jobs as marine inventory specialists, vessel maintenance workers, harbor craft operators and marine engineers.

The quick conversion of these vessels in Far East waters was literally a lifesaver in Korea. Their replacement cost would have run to many millions of dollars. As it was, the expense of repairs was cheap indeed, and their value must be measured in terms

of lives saved, time gained and the effect of their successful use in Korean waters.

In its day-to-day dealing with the Japanese, the Port uses the soundest principles of management and labor relations. The results are clearly beneficial. Although wages in Japan are far below those in the United States, the scale paid Japanese employees of the Army conforms with prevailing rates in Japanese industry. In addition they receive many benefits hitherto unknown to Japanese labor.



When dock facilities are limited, both military and commercial cargo is offloaded onto barges. U. S. Army Photograph

On-the-job safety is a primary consideration. Many of the jobs filled by Japanese workers are admittedly hazardous. To complicate matters, the average Japanese treats danger with a casualness that once baffled American supervisors. But intensive safety programs by professional safety engineers have made great inroads against the once-formidable casualty tolls. Where formerly several deaths a month were commonplace among longshoremen and dock workers, the 2d Port recently passed the three-month mark without a single fatality, a record directly attributable to its safety program.

Pilferage and damage to property are serious hazards in most port operations, but they are negligible at the 2d Major Port. Credit lies partly with a security system which insures that no

worker leaves the area with stolen goods, and partly with a unique cargo checking operation.

Cargo checking is conducted by a crew of Japanese workers. Under American supervision the cargo checkers inspect every piece of cargo unloaded from a ship's hold or loaded aboard ships or trains. When a damaged item is found or pilferage is discovered, the case is turned over to a special squad of "cargo detectives" who trace the damage or theft. If cargo is found to be damaged or stolen during handling at the Port, the stevedore contractor is charged with the cost and the amount is deducted from his contract fee. Thus checking more than pays for itself.

The command organization of the 2d Major Port is similar to most military commands, with certain changes necessitated by the unusual nature of the operation. In addition to the Port Commander, Deputy Port Commander and Executive Officer, there is a Port Operations Section, under which the major operating divisions—Troop Movement, Transportation and Water—are consolidated.

Besides handling thousands of troops, the Troop Movement Division is responsible for the debarkation and embarkation of all dependents of military personnel in Japan and for the safe delivery of their baggage, automobiles, household goods and pets.

The Transportation Division, one of the busiest units in the Port, has charge of everything from cargo disposition and mail dispatch to garbage and trash disposal.

In addition to handling millions of tons of cargo, the Water Division operates all harbor craft, floating cranes, tugs and ferries which make up the 2d Port fleet, and is responsible for the berthing of all transports and commercial ships operated or chartered by the Military Sea Transportation Service.

In support of these operating divisions are the administrative and service units required to maintain the giant sea terminal. Under the Administration Section come the Adjutant General, the Intelligence and Security Division, the Safety Division and the Chaplain. The 489th Transportation Port Battalion is the unit from which the Port derives its corps of enlisted transportation specialists. The battalion comprises a Headquarters and Headquarters Company, Port, Harbor Craft and Port Signal Detachments and a Military Police Service Company.

The business of the 2d Major Port is not all warlike. Several times each week ships tie up under the huge "Welcome to Japan" sign which adorns the headquarters building. Aboard are wives and children of officers and noncommissioned officers of

United Nations veterans from Korea gather on the dock at Yokohama. Left to right are soldiers from Greece, the Netherlands, Turkey, Ethiopia and Belgium. U. S. Army Photograph

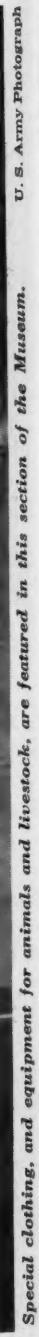
the Army, Navy, Marine Corps and Air Force stationed in Japan. Usually the family has been separted about eighteen months, and few sights gladden Port personnel like the radiant face of a soldier, corsage box clutched in one hand, as he first spies his wife and children on the deck of the incoming ship.

The Passenger Traffic Branch of the Troop Movement Division sees to it that these reunions are accomplished smoothly and without delay. It provides personalized attention for dependents until they are safely on their way to their new homes.

Similarly, outgoing troops, homeward bound on rotation from Korea or Japan, are moved quickly to dockside and aboard ship. All ships, both incoming and outgoing, are serenaded by an Army band, the strains of martial and popular music giving the Port a festive air.

Good management is the key to the Port's success. Across its docks, during more than two years of the Korean campaign, have streamed troops of seventeen United Nations, vast amounts of war supplies and thousands of dependents of military personnel stationed in Japan. If this "Gateway to the Orient" is deceptively placid in its operation, it is a triumph of careful management.

Special clothing, and equipment for animals and livestock, are featured in this section of the Museum. U. S. Army Photograph



U. S. Army Photograph

Special clothing, and equipment for animals and livestock, are featured in this section of the Museum.

CHEMICAL WARFARE MUSEUM

SERGEANT ZACHARY JAQUETT

MORE THAN seventy-five hundred different items—ranging from flame throwers and mortars to grotesque impermeable clothing and gas masks for humans, horses and camels—are presently on display at the Army Chemical Center in Maryland. Some of these specialized items are designed to kill and maim while others are the results of extensive research undertaken to counteract and prevent the tragedies of chemical warfare. The eye-catching exhibit is housed in the Army's Chemical Corps Museum which today comprises what is probably the world's largest and most extensive collection of its type.

As a center for assembling and displaying chemical warfare materials, the Museum performs an invaluable function. It preserves past efforts for exhibition and reference purposes, thereby preventing duplication of previous work and providing a guide for new developments. Recent and early types of chemical warfare materiel are exhibited along with numerous examples from foreign nations, including captured enemy items.

During the closing days of World War II the Nazi Gas and Defense School at Celle, Germany, was captured by Allied troops. Chemical Corps officers arranged for the shipment of the School's collection to Edgewood Arsenal where further study and research could be conducted. The Germans, who had made great strides in fashioning chemical equipment, had also been first-rate collectors of other nations' efforts. Russian, Italian and French items, as well as objects from other European countries dating from World War I, were included, each identified, catalogued and described in detail. This rich chemical warfare coverage of Europe, comprising some five thousand items, was perhaps the most important acquisition; meanwhile numerous Japanese examples were shipped back from the Pacific area to round out the collection which the Corps had been accumulating since 1922.

SERGEANT ZACHARY JAQUETT, USA, is on duty at the Army Chemical Center, Maryland.

Technically speaking, classification of chemical warfare equipment falls into two categories—defensive and offensive. Defensive materiel includes gas masks, smoke generators, air purifiers, protective clothing and noise makers. Among the items used offensively are napalm and incendiary bombs, mortars and flame throwers.

The first face mask, developed in Germany about 1900, was designed to aid firemen in their work. Now on display at the Museum, this awesome looking apparatus is festooned with many pipes and dials, even including built-in eye-piece wipers.

During World War I, when the Germans first employed poison gas on the battlefield, British and French troops were woefully unprepared to meet this type of attack. As an improvised means of defense, they covered their mouths and noses with pieces of gauze and left the rest to chance.

In the United States meanwhile, an Episcopal clergyman in Emmorton, Maryland, became concerned with the plight of the Allied troops and set out to develop an effective counter measure. The device he invented was not at all like the masks used today. It consisted of an air purifying apparatus with a tube attached. There was no face piece; the wearer merely stuck the tube in his mouth and sucked in pure air. The clergyman's invention is included in the Museum's display of masks from more than thirty nations.

Of interest also are the masks for horses and dogs, designed to protect domestic animals. The Germans also produced a gas mask for camels, probably with the intent of employing it in the campaigns of the *Afrika Korps*. The Japanese made masks for both cows and camels.

Among the unusual masks is one for children, designed to overcome a child's fear of donning a mask. One model created by Walt Disney is fashioned in the image of the cartoon character Mickey Mouse, complete with red button nose and large ears.

As a defense measure, various nations have developed different types of warning devices to alert the public that a gas attack is imminent. Assorted gongs, sirens, Klaxons and noise makers on display resemble enlarged versions of Hallowe'en toys but are capable of raising an effective clamor when tested.

One of the best known of the Chemical Corps items of defensive equipment is the smoke generator which is used to lay a heavy smoke screen under cover of which troops may advance or withdraw. The smoke thus produced is not poisonous, and it has proved its worth in many types of military operations. A

recent acquisition is a Russian-made smoke pot found near Seoul, Korea, in 1950.

In the category of offensive equipment is the mortar, a weapon which has recently come into prominence in Korea, but which was originally developed by and for the Chemical Corps to project high explosive and phosphorous shells. Now classified as Ordnance property, the mortar is a descendent of the Livens Projector invented by a British Army captain during World War I. The original was a cumbersome weapon, consisting of a large tube sunk into the ground and containing a charge which, when exploded, hurled a shell tumbling end over end for a short distance. Out of this early model emerged the modern type. Many designs of mortars are on display, including large German and Japanese examples, attesting to the fact that various nations have appropriated the same idea and adapted it to fit their individual needs and plans.

Among the most efficient weapons in the chemical warfare arsenal are flame throwers and napalm bombs. One flame thrower, developed in the United States, shoots a searing burst of flame at a target with the accuracy of rifle fire. This is the weapon used so effectively by American soldiers and Marines against the Japanese in World War II.

In Korea, deep enemy intrenchments have created a tough job for our troops. The Air Force, striking again and again with napalm, has destroyed thousands of the enemy in their dug-in emplacements, to ease the pressure upon United Nations troops.

With each new development, the Museum's collection is constantly expanding, creating numerous problems as to arrangement and display. Meanwhile, research on history and development continues apace with the Museum affording Chemical Corps specialists an opportunity to study the work of foreign nations as well as our own scientific progress. The data derived from this unique collection will better enable them to meet and counteract any enemy threat.

THE STATE OF THE ARMY

EXTRACTS FROM THE SEMIANNUAL REPORT OF THE SECRETARY OF THE ARMY
1 JANUARY TO 30 JUNE 1952

THE DEMANDS of America's partial mobilization have brought unprecedented problems to the Army. Mobilizing, training, fighting and demobilizing all at the same time, the Army has proved its great value to the American people in one of the most critical periods in our history.

To the Army has fallen a major share of the fighting in Korea. At the same time, we are building up our military strength at home; helping to garrison Free Europe and to establish defenses in other parts of the world; providing large quantities of vital military equipment to our allies and helping to train their armies; and, in concert with the other members of the Armed Forces team and America's industrial might, expanding our production base to support whatever greater effort the uncertain future may require. Despite these heavy demands on the Army, we are regularly releasing from active service thousands of men each month and training other thousands to replace them. To spread the burden of combat as evenly as our over-all strength will permit, we are carrying out a rotation program from Korea, the magnitude of which is unknown in military history.

We are giving our soldiers today the best training, care and material support the Army has ever offered. But the Army is concerned not only with its own physical strength and military effectiveness. It is concerned, too, with the spiritual strength and integrity of the men and women who comprise it.

To that end the Army conducts, as an integral part of its daily operations, specific programs. Such activities as the wonderful work done by our chaplains, the Character Guidance Program, troop information and education, morale and welfare activities, superior medical treatment and better administrative care are all necessities of our modern Army. As much as we would like to maintain these functions, if only to make our soldiers' lot more pleasant, these activities and many others

must pay off in a more efficient Army; otherwise they would be too expensive for an economy-minded Army to tolerate.

That we are economy-minded can be shown by examining many of our programs designed to squeeze the most value out of our money and to get full worth from our equipment. As Secretary of the Army, I have insisted that this feeling be a part of all operations from top planning in the Pentagon down to squad-level—that awareness of the economy factor be standing operating procedure from generals to privates.

No Army can afford to rest on past achievement. We must look for new and improved methods of operation. In my judgment, the ultimate strength of America's defenses lies in the field of ideas—ingenious approaches to the problem of defending ourselves and the Free World. In the Army, we must increase our fire power and mobility and at the same time reduce our battlefield casualties. In short, we must make our soldiers more efficient. We must give them the tools to do the work of, say, ten of a potential enemy whose advantage is in more manpower; we must also find better and cheaper ways of doing our day-by-day business. These are the ends to which our research and development activities, our training, our administration and our methods of combat are directed.

There is ample evidence of our progress in these fields. Advances have been made in weapons—examples of which are guided missiles, artillery capable of firing atomic projectiles, new and improved rockets and bazookas, a new family of tanks, and continuing improvements in our small arms.

The Army has adopted the helicopter as a fourth member of its hard hitting infantry-tank-artillery team. Our use of this "air truck" in Korea has greatly increased the combat effectiveness of our forces there. In future operations, we will employ organic helicopters on an even larger scale.

Although general health conditions could hardly have been worse than in Korea, the disease rate of our troops there compares favorably with the disease rate of troops elsewhere. Our record in saving the lives of wounded in Korea has been truly remarkable. It is lower than in any previous conflict. About 978 out of every 1000 wounded soldiers who reach medical facilities survive; about 85 percent of them are returned to duty. But saving a man after he is wounded is not enough. We must devise ways of protecting him from becoming a casualty and still help him carry out his aggressive missions on the battlefield. One step in this direction is the provision of body

armor which has gained a fine user response in Korea.

The battle of ideas is spreading, too, to include the less spectacular field of Army administration and other routine business. It is my hope that administrative procedures which we have installed will result in a much greater defense return for every dollar spent.

In assessing the accomplishments of the Army today, we must take into account our major role in helping to train our allies. Training is the forte of the American Army. It is a wonderful system to observe here at home. It is even more wonderful to observe among our friends. We have accomplished a miracle of training with the Republic of Korea's army. Our record with the Turkish and Greek armies also indicates what a reasonable expenditure in material and manpower training can do to help our friends develop first-class fighting forces. And it should be noted that this world-wide American training is not confined to tactical matters alone. All this pays off to America in the increased protection we obtain, in the added ability of our allies to face a Communist threat, and in the friendships we make throughout the world in the execution of this program.

> The task of satisfying the American public's demand for information concerning their Army is never-ending. I am convinced that it is one of our most important problems, beset with intangible and persistent obstacles, and constitutes one of our greatest challenges. Unless the American people as a whole understand their Army, they will not give it their whole-hearted support; and without public support it will wither from neglect and become incapable of performing the missions required of it.

It is my personal hope that as we train the men of other nations to fight for freedom, the future will permit us to reduce the size of our Army, to increase its efficiency and to lessen the burden that presently lies on American taxpayers. It is basic in our goal to return the most defense at the least cost in manpower, materials and money.

Strength, Fire Power and Mobility

The military capability of an army is based on many things. Numerical strength is one of them, though not necessarily first in order of importance. The excellence of weapons is another. A third is the availability of weapons, ammunition, supplies and equipment of all kinds, and the ability to get these things into the hands of the combat elements as needed. Mobility

is a fourth. The state of training is a fifth criterion and the morale of the troops is a sixth. A seventh is the quality of its leadership, which includes the ability to foresee, as far as humanly possible, the moves of the enemy, and to plan effective counter measures leading to victory. This list is, of course, by no means exhaustive.

During fiscal year 1952, the Army's increase in personnel strength has been rather small—only 65,000; but at the same time our major organizational strength—our fighting strength—has increased from 18 to 20 combat divisions. It should be borne in mind that the 65,000 increase is no measure of the burden of training which the Army successfully carried, inasmuch as we released approximately four hundred thousand men from service during the period and brought more than that number into it.

> The soldier in the line is not up there alone, a man with a gun thrust upon his own resources. He is supported by adequate communications; adequate provision is made to insure that he gets the ammunition he needs, the food, the clothing and the equipment; every element of the organization behind him is designed to make him the most effective soldier on earth, and to keep his name off the casualty list.

Every aspect of training has been intensified during the year. We have made training harder and more realistic, not only in justice to the man who may be called upon to go into battle and ought to have the best possible preparation, but also because the success of our mission depends in the final analysis on the training and ability of the individual soldier—and on his morale.

The fire power and mobility of our troops have been greatly enhanced during the year. At the present time, one of our infantry divisions of 18,212 men has 75 percent more fire power than a 14,037-man World War II division, although its personnel strength is only 30 percent greater. In other words, our present 16 infantry divisions would equal, in fire power, 28 of the divisions we committed to action late in World War II.

Because of advances in air mobility, our Army today can move faster and further and strike with greater surprise than ever before. Our infantry divisions are being made largely air-transportable. Mass drops of troops by parachute are not new, but techniques have been worked out by which all the necessary equipment of a fighting force—2½-ton trucks, 105-

mm. howitzers, bulldozers, jeeps, ammunition, food, even an 18-ton bridge—can also be dropped. This is not training theory. It has been successfully accomplished in Korea, under combat conditions.

The value of the helicopter for resupply, for transporting commanders over difficult terrain, and for the rapid evacuation of the wounded from almost inaccessible positions also has been dramatically demonstrated in Korea. It is becoming as much a part of today's Army as the jeep.

Research and Development

Recognizing the need for giving added impetus to, and top level supervision over, the Army's research and development effort, I assigned to a Deputy Chief of Staff specific responsibility for research. Serving on his immediate staff as Chief, Research and Development, is a general officer, with a civilian scientist as his deputy, who is charged with the direction of the Army Research and Development Program. This new organization has elevated the research and development function from its former position subordinate to the logistics function in the Army.

At my request, a group of twelve outstanding scientists and industrialists agreed to serve on an Army Scientific Advisory Panel "to assist the Secretary of the Army and the Chief of Staff in their joint responsibility to give to this country a fighting force as effective, economical and progressive as our scientific, technological and industrial resources permit." Members of this Panel went to work in January and have already made significant contributions to the Army's Research and Development Program.

Army research and development has been geared to producing the swiftest moving, hardest hitting battle team in our history; in short, an Army possessing the most effective fire power and mobility possible. We already have recoilless rifles, non-metallic mines, the Skysweeper antiaircraft gun, utility and transport helicopters, and a heavy artillery gun capable of firing both conventional and atomic projectiles in the tactical support of field armies.

The Army is devoting top priority to all aspects of atomic warfare. It is pushing ahead vigorously with the development of its own methods of delivery of atomic fire power, at the same time that it is supporting complementary delivery methods of the other two services. The Army is developing a family

of missiles which are designed to carry high explosive or atomic warheads well beyond the ranges of existing artillery weapons, even under the most adverse weather conditions. Our knowledge of the effects of atomic weapons on personnel and equipment has been enhanced through participation in development tests conducted by the Atomic Energy Commission.

In the surface-to-air field the Army's primary guided missile will provide, at an early date, a weapon capable of rapidly and accurately engaging and destroying modern high performance bombers at altitudes and ranges heretofore unknown.

However, even with the amazing developments of science, there is no reason to believe that warfare in the future would not require many of our current conventional weapons. Push-button warfare that would eliminate the man on the ground exists only in the realm of science-fiction—and I emphasize the word "fiction." Therefore, while preparing the weapons of tomorrow, we have continued to improve the weapons of today.

A new improved medium gun tank (the M-47) has been tested and accepted as an interim weapon. With its more powerful 90-mm. gun and improved fire-control system it can score a hit on the first round of any engagement more often than any other known tank. A completely new medium gun tank, the Patton M-48, that will eventually replace the M-47, is going into production. Improvements include a cast armored hull with sharply angled slopes to lessen the effect of enemy shells.

Research has uncovered principles permitting development of new techniques against enemy armor. New ammunition of radical design can be used in many weapons presently in the hands of troops to counter any tank which can be expected to be placed in the field.

Not to be overlooked in our research and development work are the contributions of the Operations Research Office, established in 1948 under contract with the Johns Hopkins University, and the Human Resources Research Office, established in 1951 under contract with George Washington University.

The Operations Research Office has undertaken many important studies in the field of operations analysis. These studies have covered a wide range of problem areas, such as psychological warfare, atomic energy, guided missiles, armor, battlefield illumination, close air support, intelligence, logistics and cost and relative effectiveness of various Army weapons.

Our newly established Human Resources Office aims its studies at developing improved personnel selection and classifi-

cation, leadership, morale, and training methods and techniques. With the objective of making each soldier more effective, it reviews the psychological problems caused by the dangers and discomforts of combat and their effect upon the soldier's will to fight. Progress in this field is encouraging, but we still have a long way to go.

Our Research and Development Program also has been instrumental in bringing about a continuing improvement in the innumerable military items, aside from weapons, which are essential to the combat efficiency of our forces. Communications and electronic equipment of new design placed in procurement during the fiscal year include a new walkie-talkie radio set, handie-talkie set, a series of front-line vehicular radio sets, portable teletypewriter, portable switchboard, mortar locator and a miniaturized radar beacon for rockets. A milestone in communications progress has been achieved with the development of an experimental radio-teletypewriter converter using transistors instead of vacuum tubes. This has made possible reductions in the size and weight of some of our communications equipment—ten times in a radio-teletypewriter, for example.

Experimentation with a mobile television system has also been initiated. A chain radar system which automatically tracks guided missiles throughout their complete flight and a new Rawin (rain-wind) set which automatically tracks weather balloons and transmits meteorological data to the ground have been put into operation.

Many improved items of personnel equipment have been adopted and placed in production during the fiscal year. They include the new sealed, insulated, rubber combat boot the use of which in Korea this past winter reduced the incidence of cold weather foot injury almost to the vanishing point and the insulated casualty evacuation bag for protection against extreme cold during medical evacuation. Development of the Coldbar suit, based on the vapor barrier principle, is continuing with promising results. A new light-weight armored vest weighing eight pounds has been developed, affording a promising degree of protection with a minimum of interference with the soldier's mobility on the battle field. This vest is designed to reduce casualties caused by fragmentation. It is currently being tested in Korea to determine general suitability.

Considerable progress has been made in the development of items used in connection with delivery of personnel and equip-

ment by parachute. Tests have been completed by the Army Field Forces on a new parachute which permits jumping from aircraft traveling at higher speeds than in the past, at the same time reducing opening shock, dampening oscillation, slowing rate of descent and providing improved safety features.

In the field of transportation numerous important projects were carried forward during the year. A typical project which was brought to the production stage is the 60-ton special purpose barge. Increasingly great strides in helicopter development have been made in the past five years with the advent of turbine and jet powered helicopters. The XH-26 will be the first pulse-jet helicopter ever put into use.

Training

During fiscal year 1952 approximately 250,000 troops took part in three major field exercises. In addition, smaller field exercises of a specialized nature and staff exercises stressing logistical support of field armies were held.

The Army operated 39 service schools providing a total of 491 courses. New enrollments during the year totalled 266,000 students, of whom approximately 12 percent were members of the Navy, Marine Corps and Air Force.

To fulfill the continuing requirements for junior officers, five new officer candidate schools were activated including Armor, Antiaircraft, Engineer, Ordnance and Signal. These along with the Artillery, Infantry, Women's Army Corps and Army General (branch immaterial) schools are a major source of our officers. Approximately 21,000 candidates were admitted during the year and some 7000 were graduated as second lieutenants prior to 30 June 1952. About 1660 selected officers and enlisted men entered civilian educational, commercial, or industrial institutions for special training.

Participation in Air Defense

The danger of crippling air attacks has given the Army more vital role than ever before in the defense of the United States. The Army Antiaircraft Command, the Army component of the air defense team, was organized in July 1950 to coordinate the Army's surface-to-air fire capabilities. Within the past year it has become a potent combat force. The number of antiaircraft battalions deployed about atomic energy installations, industrial and population centers and Strategic Air Com-

mand bases has more than doubled since the first units were assigned in April 1951.

Public Information

In spite of a sharply decreased budget and fewer public information personnel, the Army has accelerated its efforts to provide the American public with the accurate information it demands of the military establishment. During fiscal year 1952, we conducted 104 special briefings on Korean operations for the Pentagon representatives of the press, and reporters were supplied with answers to some 5300 queries about the Army.

We established an Army Home Town News Center to supervise and control the flow of news about individual soldiers to their hometown news media. Already, under this streamlined system, we have been able to provide almost 400,000 personal notes concerning local servicemen and 8200 pictures to newspapers all over the country, as well as 2000 tape recordings to individual radio stations.

In addition to providing radio and television programs with military personnel and material to help tell the Army's story, a series of 26 half-hour television productions was prepared. Entitled *The Big Picture*, this dramatic report of world wide Army activities has been seen weekly on 91 of the country's 109 television stations, reaching some twenty million viewers.

During the past year we co-operated with commercial motion picture studios on 15 feature films about the Army, thus bringing to vast audiences at no expense to the Government information about the roles and missions of the Army. At present, 35 additional films with an Army background are in various stages of production. In January 1952, a branch office of the Chief of Information was established in Los Angeles for the purpose of improving liaison between the Army and the entertainment industry.

Understanding the Army

The public has gained a greater understanding of the problems and accomplishments of the Army through a system of Civilian Aides to the Secretary of the Army which I established in late 1951 as my primary agency for civilian liaison.

In private life, the Aides are leaders in their communities and authorities in their respective fields. Civilian Aides keep the Secretary informed of local opinion or of local needs for

the welfare of the Army and also assist in interpreting the Army's policies and activities to the American public. At the same time these civilian leaders were able on an intimate basis to keep their communities informed about Army matters. The consequent flow of information helped materially in furthering the efficiency of the Army and its wholesome relationship with the American public.

Helping Other Nations Train

The training of foreign nationals throughout the world has grown into an Army activity of major significance. Some 2340 foreign nationals received training in U. S. Army-operated schools in this country during the past fiscal year. Most of this training related to the receipt, maintenance and utilization of materiel delivered under the Mutual Defense Assistance Program. In the main, it serves to train instructor-type personnel capable of carrying on similar training in the military school system of the recipient country.

A related but less formal type of training is conducted through special orientation visits to the United States by key military personnel from MDAP nations to observe the operational practices, training methods, and organization of Army schools. Eighty-five such visits took place last year.

Occasionally it has been found that better results are obtained through sending our own mobile training teams abroad to give instruction on highly complicated pieces of equipment. Six such teams were furnished European and Middle East countries under the MDAP program.

United States Army representatives abroad are doing important work in improving the indigenous school systems. These resident military missions furnish guidance to their host nations in many matters pertaining to military training. For example, upon the suggestion of the Army member in Italy, an Armored School was opened at Caserta in January 1952. This school reflects the influence of United States Army training in its organization, physical set-up and training procedures. The Army has been active in a similar way in the development of French and Belgian Tank Training Centers.

Almost from the very beginning of the unprovoked assault on the Republic of Korea, which nearly wiped out that country's military forces, the Army recognized that the keystone to the United Nations effort had to be full participation on the part of newly trained Republic of Korea manpower. Since that time,

the Army has been engaged in an intensive effort to build up the military capacity of our Republic of Korea ally. Vast strides have been made in developing a reliable and effective combat army which has grown from a small force reduced to 25,000 to 30,000 during early fighting to a well-trained, well-equipped and well-led force of about 400,000 [as of November 1952]. This army of major proportions has been created literally on the field of battle and is proving itself more than the equal man for man of the Communist enemy.

It is the Army's intention to continue the development of South Korean forces as rapidly as the availability of equipment and the training of adequate military leadership will permit. Because of the absence of a professional Korean officer corps at the outset, it has been necessary to build this group almost from the ground up. The development of leaders is one of the controlling factors in the expansion of the ROK Army today. While this naturally takes time, good leaders are already taking command of various units and many more will follow.

> Our combat rotation program is one of the major reflections of the Army's respect for the individual soldier. Because of it, the burden of combat is being widely distributed, instead of being allowed to rest indefinitely upon the shoulders of a comparatively few.

Elsewhere, eight Military Assistance Advisory Groups in the European area, each of which contains an Army Section, have accelerated the programs for which they are responsible under the Mutual Security Program.

Great progress has been made in strengthening and training the armed forces of Greece and Turkey through the efforts of the Joint United States Military Advisory Groups in those countries. In Greece, the Army Section of the Group was required to increase its activities because of the withdrawal of the British Army Mission to Greece in April 1952. In Iran the United States Mission, under contract to the Iranian Government, has continued its activities in connection with the Iranian Gendarmerie and the Iranian Army.

The Military Assistance Advisory Group to the Nationalist Government of China, which was established as a result of the United States-Chinese inter-governmental agreement of 9 February 1951, has made considerable progress in reorganizing, equipping and training of the Chinese Nationalist divisions

on Formosa. The Army Section of this Group is currently conducting a vigorous training program.

In the Philippines, the Joint United States Military Advisory Group has furnished supplies to, and trained units of, the Philippine Armed Forces. Because of this the internal security of the Philippines has gradually improved as dissident Communist resistance elements have been destroyed.

The Military Advisory Assistance Group for Indo-China has continued its program of assistance to the governments of the Associated States and the French forces in Indo-China.

Army Missions to fourteen Latin American Governments have conducted supervision of training of the armies of those governments in United States doctrines and techniques.

Personnel

At the end of fiscal year 1952 strength of the Army was 1,596,419. The enlisted strength was made up of 40 percent Regular Army, 56 percent selectees, and only 4 percent Reserve and National Guard. Of the 500,000 who entered through enlistment, re-enlistment, induction, or call to active duty from the Reserve, more than 350,000 had no prior service.

Our original planning was based on the hope that the Korean warfare would be ended. While the truce talks did reduce casualties, the continued fighting made it necessary to step up our procurement of personnel in order that we might rotate our personnel overseas and separate reservists who had completed their tours.

> We fully recognize that an American soldier has the right to know not only what is going on, but also why. We recognize the fact that he will be a better soldier if he understands his role in the Army, and understands the events, conditions, policies and official actions which affect him as an individual. It is the mission of troop information to make him the best informed soldier in the world. We regard it as a direct responsibility of each troop commander to insure the success of this mission.

During fiscal year 1953, we will lose about seven hundred and fifty thousand soldiers, or about one half of the Army largely built up since hostilities began in Korea. The period of mandatory active service for the men who came in at that time is expiring. Thus the Army is faced with the huge task of training large numbers of replacements at the same time it is carrying on its other difficult jobs. This system of short

service is very costly in time and money. But in this period of half-peace, half-war, I believe some reasonable limit to a soldier's mandatory service is the only fair way of meeting our defense requirements.

Economy

Cost consciousness and supply economy have been made integral parts of the basic training program and of every training and indoctrination program on up through the highest schools and courses. A significant part of the cost consciousness and supply economy program is directed at the soldier or workman who actually uses equipment and supplies. For example, items of equipment from rifles and bayonets on up to tanks have been price-tagged in order to impress their cost upon the individual user. New soldiers are required to learn the cost of various items of clothing or equipment. They are reminded time and again that their tax dollars help pay for these items.

Savings range from a few dollars in the case of an individual soldier who makes an extra effort to take care of his equipment, to the billions saved through the tremendous rebuild program of the Army Depot Maintenance System, which, during the fiscal year, returned to the supply lines, at a rebuild cost of only five hundred million dollars, unserviceable World War II materiel which today would cost over four billion—a return of nearly eight dollars in value for every one dollar expended.

We in the Army realize the importance of the tremendous task thrust upon us by the critical world situation. We realize it is our obligation to provide the United States with a military force capable of preserving a peace, fighting and winning a war, fulfilling our country's commitments to her allies, and accomplishing any other task assigned it. We also realize the necessity of meeting this obligation with the least possible expenditure of men, money or materiel.

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